Measuring discharge (Q):

* Set ysi sonde logging specific conductance every 15 seconds (can also write by hand if memory is full or logging function doesn’t work).
* Move upstream ~10min (however far you think it will take 10min for the slug to reach where the sonde is logging)
* Dissolve NaCl in a bucket (a decent measure of thumb is ~100g for every 10L/s discharge you think you have. i.e., if you think the stream is 60L/s, dump in 600g)
  + If you have two people, the second person can stay downstream to monitor the sonde, rinse out all the syringes and take background samples. If not, these tasks need to get done at some point before the TASCC slug.
* Upstream: Dump in thalweg, rinse out bucket quickly
* Downstream: once SpC has returned to background, import data (or enter by hand) into Steve Thomas’s Q & nutrient spreadsheet to calculate Q and necessary nutrients

TASCC slug

* Weigh out nutrients calculated in previous step (or choose from various combinations of pre-weighed chemicals)
* Set sonde to log again for every 5 seconds (note that I usually don’t use this data and just go by what is hand written in the book as we sample).
* Line up 60ml syringes, 1-20 (or whatever you have) on bank
* Upstream (depending on how long it took the slug to come through during the discharge curve, you may need to go further up from the original injection point): dissolve nutrient salts in bucket of water, then add NaCl and dissolve (note that we usually don’t use nearly as much salt as it recommends in the spreadsheet). At an agreed upon time (if you have a second person downstream) dump in the salt. If you are alone, move downstream to sampling point as quickly as possible.
* Once slug reaches sampling point, fill syringe #1 while making note of the corresponding SpC, time, temp, etc in your field notebook.
* 30s later, fill syringe #2 while making note…. Etc (in slower moving streams, you may need to sample less often. We basically try to get ~10 samples on the ascending limb and ~10 on the descending—you can decide how to parse this out based on your discharge curve. The most important thing is that you make note of the time and SpC when you sample) Note: if there are two people, once the ‘slug dumper’ reaches the sampling point, they can take over either writing or sampling. Keep samples on ice or at least in stream water.

Finishing up:

* Once all of the samples have been collected/ conductivity has returned to background, it’s time to filter the samples (we usually return to the truck to do this as it’s easier to have a flat surface to work on).
* Attach filter head loaded with 25mm GFF to syringe and filter sample into bottles. We do SRP, NH4 and NO3 like this: use ~10ml two do two rinses of the NH4 bottle, (stop at 55ml (the syringe should be over-filled to begin with)), fill bottle with 10ml. Rinse SRP and NO3 2x with ~15 ml, (stop at 30ml). Fill SRP with 10ml, and use the rest for NO3.
  + In order to prevent contamination, we work up in concentration. I.e. if the slug peaked at 10, we’ll filter 1-10, change the filter, then filter 20-11.
* Measure length of injection reach and widths or depths.